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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,970	11/18/2003	Alex Horng	HORN3171/EM	4591
23364	7590	12/01/2006	EXAMINER	
BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314			VERDIER, CHRISTOPHER M	
			ART UNIT	PAPER NUMBER
			3745	

DATE MAILED: 12/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/714,970

Applicant(s)

HORNG ET AL.

Examiner

Christopher Verdier

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Applicant's Amendment dated September 11, 2006 has been carefully considered but is non-persuasive. Claims 1-13 are pending. The specification has been amended to remove the new matter introduced on the last full paragraph of page 3 that bridges page 4. However, the replacement paragraph for the first full paragraph on page 6, beginning at line 8, at line 9, still contains the term "cool", which is new matter as set forth later below. The specification has been amended to correct the informality set forth in the Office action mailed November 8, 2005, and the claims have been amended to overcome the rejections under 35 USC 112, first and second paragraphs. Correction of these matters is noted with appreciation.

With regard to Taiwanese Patent 540,641, Applicant has argued that this reference does not disclose a fan unit spaced apart from an air outlet for allowing air to pass through near regions below a hub portion of the fan unit and that the top frame 70 cannot confine air to pass through below a hub portion of the fan wheel 60. Applicants have also argued that the housing has a base plate and plural ribs 56 arranged at an air outlet of the air passageway, leaving no portion of the air passageway that extends past the hub portion of the fan wheel. These arguments are not persuasive, because the Taiwanese Patent (the figures of pages 8734-8737) discloses a fan unit 60 spaced apart from an air outlet near 56 for allowing air to pass through near regions below a hub portion near 62 of the fan unit (see the lower figure on page 8734), with an air guiding member 52 having an unnumbered sidewall for confining air in the air passageway to pass through near regions below a hub portion of the fan unit. The air guiding member 52 confines air to pass through below a hub portion of the fan wheel 60. With regard to Applicants' arguments that the Taiwanese Patent '641 has plural ribs 56 arranged at an air outlet

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of the air passageway, leaving no portion of the air passageway that extends past the hub portion of the fan wheel, and does not disclose a first section of the air passageway where a portion of the fan blades and hub are received, and a second section of the air passageway below the hub portion of the fan unit, the examiner disagrees. As set forth above, the figure of page 8734 of the Taiwanese Patent '641 discloses a first section of the air passageway where a portion of the fan blades 66 and hub (near 62) are received (the upper section), and an unnumbered lower portion of the air passageway that extends past the hub portion of the fan wheel 60.

With regard to Applicant's arguments that Taiwanese Patent 540,641 does not disclose that the annular side wall defining the air passageway has an unobstructed part for confining air in the air passageway to pass through below a hub portion of the fan wheel, and that no portion of the air passageway extends past hub portion of the fan wheel unobstructed, i.e. there is no second unobstructed section of the air passageway below the hub portion of the fan unit, this argument is correct. However, Hong '506 and '700 both teach respective impellers 2, 2 mounted to respective bases 32, 11 of respective cover plates 3, 1. Following the teachings of Hong '506 and '700, there is no need for the motor 58 in Taiwanese Patent 540,641 to be supported by the ribs 56. Omission of an element and its function is obvious if the function of the element is not desired. MPEP 2144.04 II. With regard to Applicant's argument that ribs 56 are required in Taiwanese Patent 540,641 to support the fan motor and blade structure 60, it would be obvious to a person having ordinary skill in the art that the ribs are not required when following the teachings of Hong '506 and '700 that the impeller is supported by mounting it to the base of the

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cover plate, since the omission of an element and its function is obvious if the function of the element is not desired.

Specification

The amendment filed October 27, 2005 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

In the replacement paragraph for the first full paragraph on page 6 beginning at line 8, at line 9, the addition of the term "cool" to describe the air has no antecedent basis in the original specification and claims and is new matter.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-2, 5, 9, and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taiwanese Patent 540,641 in view of Hong 5,582,506. The Taiwanese Patent (the figures of pages 8734-8737) discloses a heat dissipating fan substantially as claimed, including a cover plate 70 with an air inlet 54, an impeller 60 including plural blades 66, an air guiding member 52 including an unnumbered annular sidewall that defines an unnumbered air passageway defined between a first end and a second end of the air guiding member, the air guiding member being a single hollow member, with the first end of the air guiding member connected to the cover plate in a stacked manner, and the air guiding member further including an air outlet near 56 proximate to the second end of the air guiding member beyond the impeller such that the air outlet can be expanded, a portion of an axial height of a blade being received in a first top section of the air passageway defined between the air inlet and a middle point of the air guiding member and a lower portion of a hub portion (near 62 in the figure on page 8734) of the impeller received in the first section of the air passageway so as to reduce an overall thickness of the impeller and the air guiding member, and a second bottom section of the air passageway defined between the

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middle point and the air outlet below the fan unit, plural auxiliary side inlets (74, and the inlets defined between elements 72) defined between the cover plate and the air guiding member, with air intake occurring at the same time in the air inlet and in the auxiliary side inlets when the impeller turns, the sidewall confining air in the second section of the air passageway whereby the confined air passes through near regions below the hub portion of the impeller and then exits the expanded air outlet in a predetermined direction, with the cover plate including a first engaging portion (posts 72) and the air guiding member including an unnumbered second engaging portion (below posts 72) engaged with the first engaging portion, with the cover plate including plural posts (rectangular posts 72) projecting downward from a peripheral portion of an underside of the cover plate, thus reducing the possibility of entrance of alien objects and improving structural strength of the impeller.

However, the Taiwanese Patent does not disclose that the cover plate is a fan supporting cover plate with a fan supporting base, with the impeller mounted to the fan supporting base of the cover plate, with the impeller being mounted to an upper side of the base of the cover plate, with plural ribs connected between the cover plate and the base, with the ribs forming plural stationary blades for guiding airflow. Rather, the impeller is mounted to the air guiding member. Additionally, the Taiwanese Patent does not disclose that there is no part of the air guiding member formed in the air passageway, rather ribs 56 are located between a first end and a second end of the sidewall.

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Hong '506 (figures 1-3) shows a heat dissipating fan having an impeller 2 mounted to a base 32 of a cover plate 3, with the impeller being mounted to an upper side of the base of the cover plate, with plural ribs 31 connected between the cover plate and the base, with the ribs forming plural stationary blades for guiding airflow, for the purpose of securely mounting the impeller to the cover plate, and allowing a large amount of air to be induced.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to form the fan of Taiwanese Patent 540,641 such that the impeller is mounted to a base of the cover plate, with the impeller being mounted to an upper side of the base of the cover plate, with plural ribs connected between the cover plate and the base, with the ribs forming plural stationary blades for guiding airflow, as taught by Hong '506, for the purpose of securely mounting the impeller to the cover plate, and allowing a large amount of air to be induced. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to remove the ribs 56 from the fan of Taiwanese Patent 540,641 since the omission of an element and its function is obvious if the function of the element is not desired (because the impeller is supported by the cover plate, there is no need for the motor 58 or the ribs 56 in Taiwanese Patent 540,641), and for the purpose of simplifying assembly and reducing the cost and complexity of the fan unit.

Claims 1-2, 6, 9, and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taiwanese Patent 540,641 in view of Hong 5,552,700. The Taiwanese Patent (the figures of pages 8734-8737) a heat dissipating fan substantially as claimed, including a cover plate 70

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with an air inlet 54, an impeller 60 including plural blades 66, an air guiding member 52 including an unnumbered sidewall that defines an unnumbered air passageway defined between a first end and a second end of the air guiding member, the air guiding member being a single hollow member, with the first end of the air guiding member connected to the cover plate in a stacked manner, and the air guiding member further including an air outlet near 56 proximate to the second end of the air guiding member beyond the impeller such that the air outlet can be expanded, a portion of an axial height of a blade being received in a first top section of the air passageway defined between the air inlet and a middle point of the air guiding member and a lower portion of a hub portion (near 62 in the figure on page 8734) of the impeller received in the first section of the air passageway so as to reduce an overall thickness of the impeller and the air guiding member, and a second bottom section of the air passageway defined between the middle point and the air outlet below the fan unit, plural auxiliary side inlets (74, and the inlets defined between elements 72) defined between the cover plate and the air guiding member, with air intake occurring at the same time in the air inlet and in the auxiliary side inlets when the impeller turns, the sidewall confining air in the second section of the air passageway whereby the confined air passes through near regions below the hub portion of the impeller and then exits the expanded air outlet in a predetermined direction, with the cover plate including a first engaging portion (posts 72) and the air guiding member including an unnumbered second engaging portion (below posts 72) engaged with the first engaging portion, with the cover plate including plural posts (rectangular posts 72) projecting downward from a peripheral portion of an underside of the cover plate, thus reducing the possibility of entrance of alien objects and improving structural strength of the impeller.

However, the Taiwanese Patent does not disclose that the cover plate is a fan supporting cover plate with a fan supporting base, with the impeller mounted to the fan supporting base of the cover plate, with the impeller being mounted to an underside of the base of the cover plate, with plural ribs connected between the cover plate and the base, with the ribs forming plural stationary blades for guiding airflow. Rather, the impeller is mounted to the air guiding member. Additionally, the Taiwanese Patent does not disclose that there is no part of the air guiding member formed in the air passageway, rather ribs 56 are located between a first end and a second end of the sidewall.

Hong '700 (figures 1-3) shows a heat dissipating fan having an impeller 2 mounted to a base 11 of a cover plate 1, with the impeller being mounted to an underside of the base of the cover plate, with plural ribs 101 connected between the cover plate and the base, with the ribs forming plural stationary blades for guiding airflow, for the purpose of securely mounting the impeller to the cover plate, and allowing a large amount of air to be induced.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to form the fan of Taiwanese Patent 540,641 such that the impeller is mounted to a base of the cover plate, with the impeller being mounted to an underside of the base of the cover plate, with plural ribs connected between the cover plate and the base, with the ribs forming plural stationary blades for guiding airflow, as taught by Hong '700, for the purpose of securely mounting the impeller to the cover plate, and allowing a large amount of air to be

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induced. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to remove the ribs 56 from the fan of Taiwanese Patent 540,641 since the omission of an element and its function is obvious if the function of the element is not desired (because the impeller is supported by the cover plate, there is no need for the motor 58 or the ribs 56 in Taiwanese Patent 540,641), and for the purpose of simplifying assembly and reducing the cost and complexity of the fan unit.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taiwanese Patent 540,641 and Hong 5,582,506 as applied to claim 2 above, and further in view of Katsui 5,559,674. The modified fan of the Taiwanese Patent shows all of the claimed subject matter except for the first engaging portion including plural through holes and the second engaging member including plural posts each having a screw hole aligned with the respective through hole.

Katsui (figure 2) shows a heat dissipating fan having a cover plate 84 with a first engaging portion including unnumbered through holes (filled by screws 92) and an air guiding member 82 having plural posts 85A, 85B, 85C, 85D each having an unnumbered screw hole aligned with the respective through hole, for the purpose of allowing the cover plate to be securely fastened to the air guiding member.

It would have been further obvious at the time the invention was made to a person having ordinary skill in the art to form the modified fan of Taiwanese Patent 540,641 such that the first

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engaging portion includes plural through holes and the second engaging member includes plural posts each having a screw hole aligned with the respective through hole, as taught by Katsui, for the purpose of allowing the cover plate to be securely fastened to the air guiding member.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taiwanese Patent 540,641 and Hong 5,582,506 as applied to claim 2 above, and further in view of Gan 6,817,939. The modified fan of the Taiwanese Patent shows all of the claimed subject matter except for the second engaging portion including plural through holes and the first engaging member including plural posts each having a screw hole aligned with the respective through hole.

Gan shows a heat dissipating fan having a cover plate 40 (element 40 is broadly considered to be a cover plate) and an air guiding member 30, with the cover plate including a first engaging portion (near 42) and the air guiding member including a second engaging portion 312, with the second engaging portion including plural through holes 312 and the first engaging member including plural posts (near 42) each having a screw hole 42 aligned with the respective through hole 312, for the purpose of allowing the cover plate to be securely fastened to the air guiding member.

It would have been further obvious at the time the invention was made to a person having ordinary skill in the art to form the modified fan of Taiwanese Patent 540,641 such that the second engaging portion includes plural through holes and the first engaging member includes

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plural posts each having a screw hole aligned with the respective through hole, as taught by Gan, for the purpose of allowing the cover plate to be securely fastened to the air guiding member.

Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taiwanese Patent 540,641 and Hong 5,582,506 as applied to claim 1 above, and further in view of either (Ko 2004/0201961 or Chen 6,524,674). The modified fan of the Taiwanese Patent shows all of the claimed subject matter except for a sectional area of an air outlet side of the air passageway being smaller than that of an air inlet side of the air passageway, and except for the air passageway extending in a direction at an angle with an airflow direction, guiding the airflow to the predetermined direction.

Ko (figures 3A-3B) shows a fan having an unnumbered air guiding member formed such that the sectional area of an air outlet side of an air passageway of the air guiding member is smaller than that of an air inlet side of the air passageway, with the air passageway extending in a direction at an angle with an airflow direction, guiding the airflow to a predetermined direction, for the purpose of allowing concentrated air streams to provide better heat dissipating performance.

Chen (figures 2a-2b) shows a fan 22 having an air guiding member 21 formed at 213 such that the sectional area of an air outlet side 212 of an air passageway of the air guiding member is smaller than that of an air inlet side of the air passageway, with the air passageway extending in a direction at an angle with an airflow direction, guiding the airflow to a

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predetermined direction, for the purpose of concentrating airflow toward a central area, thus improving heat dissipation.

It would have been further obvious at the time the invention was made to a person having ordinary skill in the art to form the modified fan of Taiwanese Patent 540,641 such that a sectional area of an air outlet side of the air passageway is smaller than that of an air inlet side of the air passageway, with the air passageway extending in a direction at an angle with an airflow direction, guiding the airflow to the predetermined direction, as taught by Ko, for the purpose of allowing concentrated air streams to provide better heat dissipating performance, or as taught by Chen, for the purpose of concentrating airflow toward a central area, thus improving heat dissipation.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taiwanese Patent 540,641 in view of Hong 5,582,506. The Taiwanese Patent (the figures of pages 8734-8737) discloses a heat dissipating fan substantially as claimed as set forth above, with the cover plate 70 including plural posts (rectangular posts 72) projecting downward from a peripheral portion of an underside of the cover plate, thus reducing the possibility of entrance of alien objects and improving structural strength of the impeller.

However, the Taiwanese Patent does not show that the air guiding member 52 includes the rectangular posts 72, such that the posts project upward from a peripheral portion of an upper side of the air guiding member.

It would have been further obvious at the time the invention was made to a person having ordinary skill in the art to form the modified fan of the Taiwanese Patent such that the air guiding member 52 includes the rectangular posts 72, such that the posts project upward from a peripheral portion of an upper side of the air guiding member, since it has been held that mere reversal of parts is an obvious engineering expedient. *In re Gazda*, 219 F.2d 449, 104 USPQ 400 (CCPA 1955).

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taiwanese Patent 540,641 and Hong 5,582,506 as applied to claim 12 above, and further in view of Bendikas 6,457,949. The modified fan of the Taiwanese Patent shows all of the claimed subject matter, including stationary blades, but does not show the stationary blades including an inclining angle opposite to that of the blades.

Bendikas (figure 1) shows a heat dissipating fan near 10 having unnumbered stationary blades that have an inclining angle that is opposite to that of blades of fans 40, 41, 42, for example, for the purpose of smoothly guiding airflow at the fans.

It would have been further obvious at the time the invention was made to a person having ordinary skill in the art to form the modified fan of the Taiwanese Patent such that the stationary blades include an inclining angle opposite to that of the blades, as taught by Bendikas, for the purpose of smoothly guiding airflow at the fan.

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THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

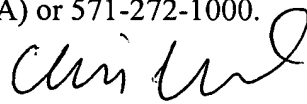
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Verdier whose telephone number is (571) 272-4824. The examiner can normally be reached on Monday-Friday from 10:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward K. Look can be reached on (571) 272-4820. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

C.V.
November 20, 2006


Christopher Verdier
Primary Examiner
Art Unit 3745